

## AMENDMENTS TO THE CLAIMS

- 1.(previously presented) A non-invasive method for diagnosing pathology in the bladder of a patient comprising the steps of:
  - placing a plurality of electrodes on the patient;
  - acquiring vesico internal sphincter electromyogram (VISEMG) waveforms from the electrodes on a patient;
  - converting the VISEMG waveforms to non-invasive (NI) urodynamic graphs;
  - displaying the results of the method; and diagnosing the condition of the bladder.
2. (previously presented) The method of claim 1 further comprising the step of assessing the condition of the bladder automatically based on the VISEMG waveforms.
3. (previously presented) The method of claim I wherein displaying the results comprises displaying the NI urodynamic graphs.
4. (previously presented) The method of claim I wherein displaying the results comprises displaying the VISEMG waveforms
5. (previously presented) The method of claim I wherein displaying the results comprises displaying the diagnosis of bladder condition based on the VISEMG waveforms.
6. (previously presented) The method of claim 1 wherein placing the electrodes on

the patient comprises placing a plurality of surface patches on the patient's abdomen including the suprapubic and perineal regions.

7. (previously presented) An apparatus for diagnosing bladder pathology from electromyographic (VISEMG) waveforms comprising:
- a plurality of surface electrodes;
  - a plurality of input amplifiers for receiving electrical signals from VISEMG surface electrodes, each amplifier including at least one filter coupled to the amplifier for filtering each VISEMG signal;
  - an analog to digital converter (ADC) coupled to the amplifiers for sampling the analog signals and converting each sampled signal to a digital VISEMG waveform;
  - a conversion software for converting VISEMG waveforms to non-invasive (NI) urodynamic graphs;
  - a programmed computer to receive the digital signals and to convert them to NI urodynamic graphs; and
  - a display to output the results of the VISEMG measurement useful to diagnose the condition of the bladder based on the VISEMG measurement.
8. (previously presented) The apparatus of claim 7 wherein the display further comprises user selectable display modes to display information selected from the group consisting of NI graphs, NI graphs and bladder condition based on the VISEMG waveforms, VISEMG waveforms, VISEMG waveforms and bladder

condition based on the VISEMG waveforms, and NI graphs and VISEMG waveforms and VISEMG waveforms and bladder condition based on the VISEMG waveforms.

9. (previously presented) The apparatus of claim 7 wherein the display displays NI urodynamic graphs converted from the digital VISEMG waveforms.
10. (previously presented) The apparatus of claim 9 wherein the display further displays suspected bladder pathologies based on the VISEMG waveforms
11. (previously presented) The apparatus of claim 7 wherein the display displays a representation of the digital VISEMG waveform.
12. (previously presented) The apparatus of claim 7 wherein the display further displays suspected bladder pathologies based on the VISEMG waveforms.
13. (previously presented) The apparatus of claim 7 wherein the apparatus is portable.
14. (previously presented) The apparatus of claim 7 wherein the conversion software is updated from a media selected from the group consisting of CDROM, floppy disk, portable magnetic storage media, portable RAM drives, portable hard drives, and solid state drives.
15. (previously presented) The apparatus of claim 7 wherein the conversion software is updated from an update server by a communications mode selected from the group consisting of Internet, Intranet, cable, telephone, satellite, and wireless.

Claims 16 through 41 (canceled)